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Title: **JP11240970A2: POROUS MEMBRANE AND SEPARATOR USING THE SAME A USED FOR BATTERY**

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Country: **JP Japan**
Kind: **A**

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Application Number: **JP1998000042515**

IPC Class: **C08J 9/00; C08K 5/20; H01M 2/16; C08L 23/02;**

Priority Number(s): **Feb. 24, 1998 JP1998199842515**

Abstract:



Problem to be solved: To provide a porous membrane having a low shutdown(SD)-initiating temperature and a large SD rate and useful as a separator for a battery.
Solution: This porous membrane is formed from a mixture of a polyolefin with a substance which has a lower melting point than that of the polyolefin and is incompatible with the polyolefin. The substance comprises at least one of a resin having a viscosity-average mol.wt. of 100-10,000 and an aliphatic compound having 9-22 carbon atoms in the aliphatic chain. When the ion transmission-interrupting temperature of the porous membrane is set to a range of 105-130°C, and when the electric resistance of the porous membrane is measured on the basis of JIS C 2313, the electric resistance value of the porous membrane after a thermal treatment at 130°C for 0.6 sec is set to ≥20 times an electric resistance before the treatment. Polypropylene and highly dense polyethylene wax may be used as the polyolefin and the substance, respectively.

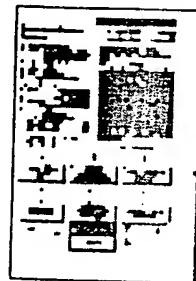
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Other Abstract Info: **CHEMABS 131(14)186015K CHEMABS 131(14)186015K DERABS C1999-555112 DERABS C1999-555112**

Foreign References: **No patents reference this one**



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(74) Representative:

(54) POROUS MEMBRANE AND SEPARATOR USING THE SAME AND USED FOR BATTERY**(57) Abstract:**

PROBLEM TO BE SOLVED: To provide a porous membrane having a low shutdown(SD)-initiating temperature and a large SD rate and useful as a separator for a battery.

SOLUTION: This porous membrane is formed from a mixture of a polyolefin with a substance which has a lower melting point than that of the polyolefin and is incompatible with the polyolefin. The substance comprises at least one of a resin having a viscosity-average mol.wt. of 100-10,000 and an aliphatic compound having 9-22 carbon atoms in the aliphatic chain. When the ion transmission-interrupting temperature of the porous membrane is set to a range of 105-130°C, and when the electric resistance of the porous membrane is measured on the basis of JIS C 2313, the electric resistance value of the porous membrane after a thermal treatment at 130°C for 0.6 sec is set to

≥20 times an electric resistance before the treatment. Polypropylene and highly dense polyethylene wax may be used as the polyolefin and the substance, respectively.

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